

REDISCOVERY OF THE PERREYIINE GENUS *BARILOCHIA* MALAISE (HYMENOPTERA: PERGIDAE) IN SOUTH AMERICA

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Abstract.—The sawfly genus *Barilochia* Malaise (Pergidae: Perreyiinae) was known from a single specimen of one species, *B. brunneovirens* Malaise, from San Carlos de Bariloche, Rio Negro, Argentina. A second species from Chile, *B. longivalvula*, n. sp., is described and illustrated. A male of *Barilochia* is described for the first time. The possible host plant is *Nothofagus dombeyi* (Coihue) (Nothofagaceae).

Key Words: sawflies, new species, Chile

Described by Malaise (1955), *Barilochia* has been known from a single specimen of one species, *Barilochia brunneovirens* Malaise, 1955, from Rio Negro, Argentina. Smith (1990) saw no additional specimens in a study of Neotropical Pergidae but redescribed the genus and separated it from other genera of Perreyiinae. Other subsequent references only list the genus and species in catalogs or checklists (Smith 1978, 2006; Schmidt and Smith 2006). After over 50 years, the genus was still known from a single specimen until two specimens representing a second species were collected in Chile. We describe this species and describe the first known male of the genus.

MATERIALS AND METHODS

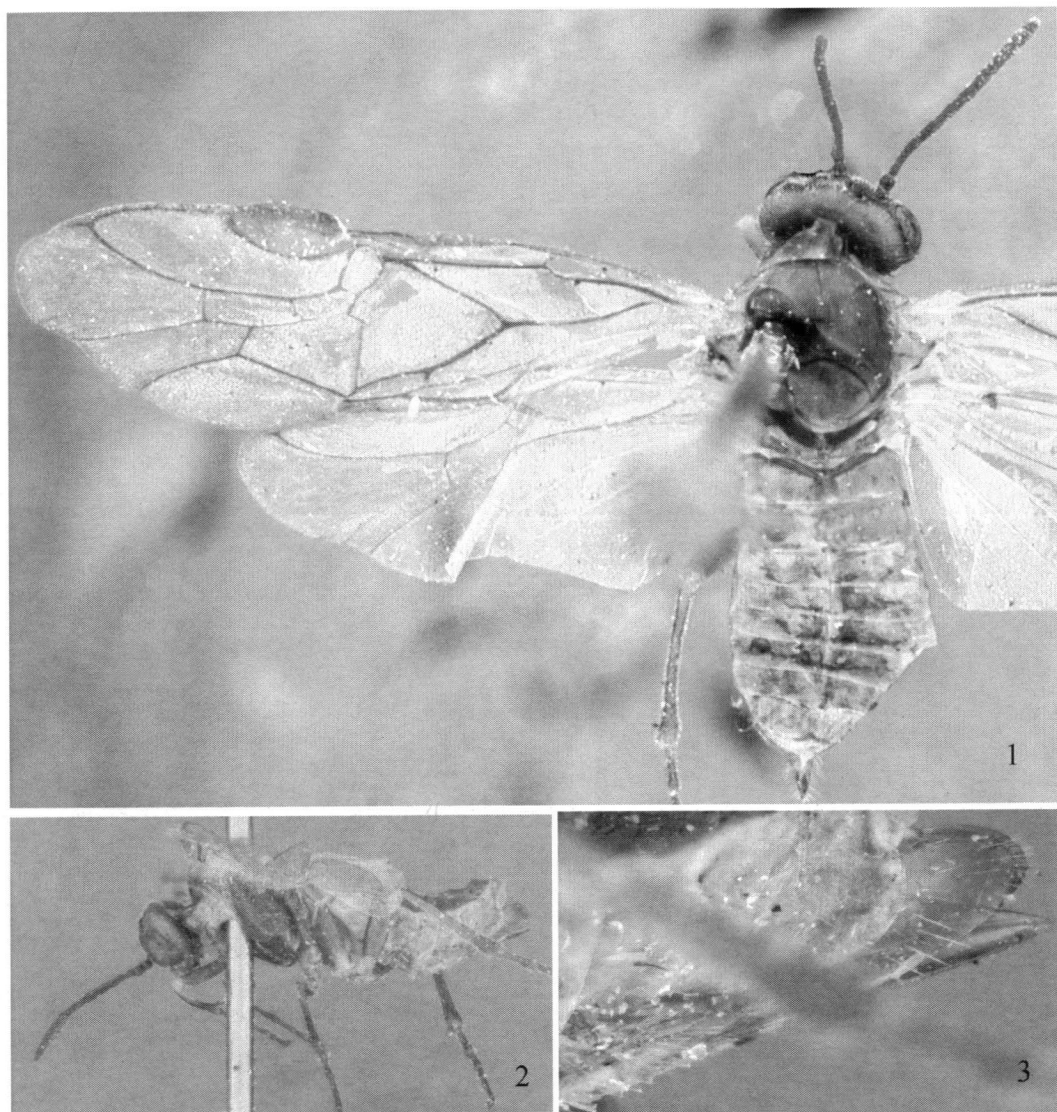
Acronyms used are: NRM, Naturhistoriska Riksmuseum, Stockholm, Sweden; USNM, National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA. Images were obtained using an EntoVision Imaging Suite that included a firewire JVC KY-75 3CCD digital camera mounted to a Leica M16 zoom lens via a Leica z-step microscope stand. Multiple focal planes were merged using Cartograph 5.6.0 (Microvision Instruments, France) software.

RESULTS AND DISCUSSION

Barilochia Malaise

Barilochia Malaise 1955: 124. Type species: *Barilochia brunneo-virens* Malaise, by original designation.—Smith 1978: 168 (catalog).—Smith

* Accepted by Michael W. Gates

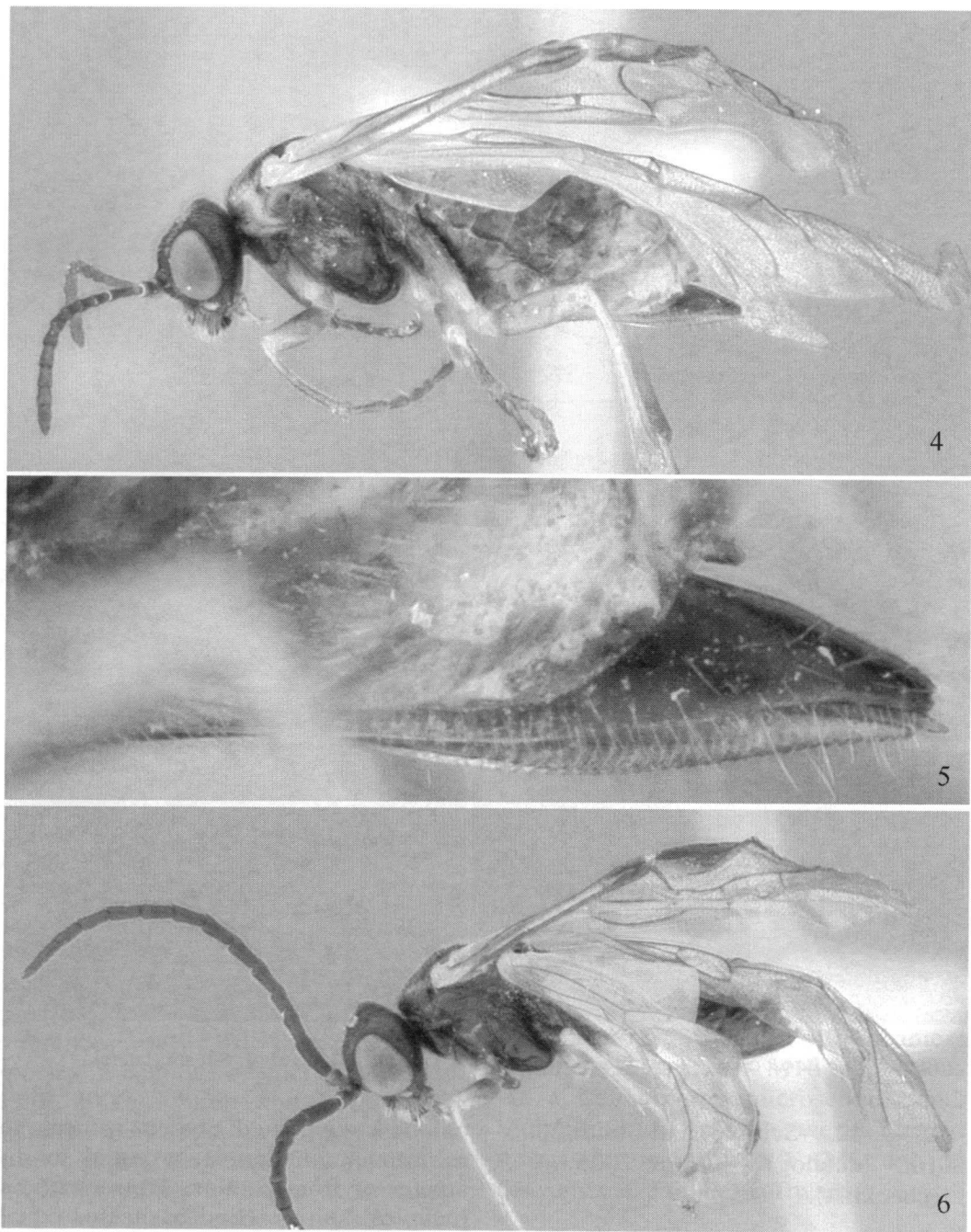


Figs. 1–3. *Barilochia brunneovirens*, holotype. 1, Dorsal. 2, Lateral. 3, Sheath, lateral.

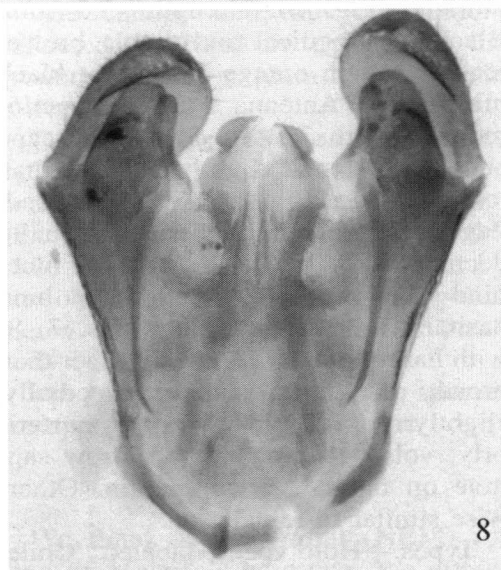
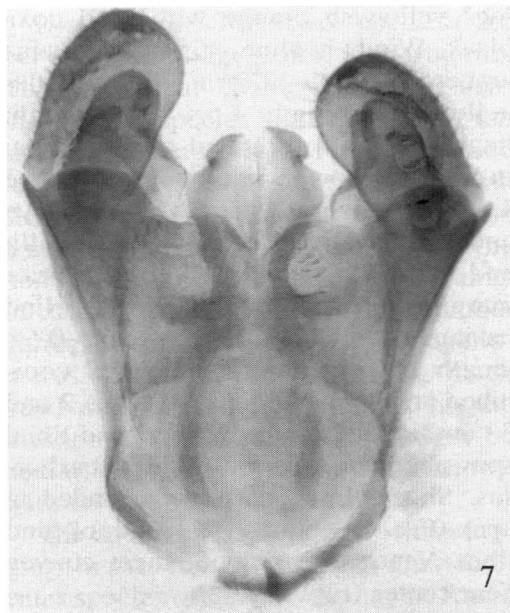
1990: 42.—Schmidt and Smith 2006: 108 (catalog).—Smith 2006: 615 (checklist).

Diagnosis.—Length less than 5 mm. Antenna filiform; scape and pedicel each about as long as wide; 9–10 flagellomeres in female (Figs. 1, 4), 13 flagellomeres in male (Fig. 6); 1st flagellomere 1.5× longer than 2nd. Maxillary palpus 5-segmented, labial

palpus 3-segmented; clypeus truncate to subtruncate; malar space equal to diameter of front ocellus. Tibiae without preapical spines. Hind basitarsus equal to or slightly shorter than following 2 tarsomeres combined. Forewing with 4 cubital cells, intercostal crossvein present; hind wing with closed radial cell, its apex near apical margin of wing. Female sheath simple, slender in dorsal view, without scopae (Figs. 1, 3, 5).



Figs. 4-6. *Barilochia longivalvula*, female holotype, male paratype. 4, Female, lateral. 5, Female sheath, lateral. 6, Male, lateral.



Figs. 7–8. *Barilochia longivalvula*, male genitalia. 7, Ventral. 8, Dorsal.

Remarks.—Smith (1990) studied the unique specimen of *B. brunneovirens* and indicated that more material is needed in order to evaluate the status of the genus. Discovery of an additional species in Chile confirms *Barilochia* as a distinct genus. It belongs in the group

of Perreyiinae with a strong ovipositor, which includes *Camptoprium* Spinola and *Heteroperreyia* Schrottky (Smith 1990). Malaise (1955) stated that it is related to the former but gave no characters to separate it from this or other genera. The truncate clypeus precludes its inclusion in *Camptoprium*, which has a deeply emarginated clypeus. It is separated from *Heteroperreyia* by the filiform antennae, bladelike female sheath lacking scopae or any lateral projections, and the sheath smooth and shining laterally. In *Heteroperreyia*, the antennae of both sexes are pectinate, the female sheath has laterally projecting scopae, and the sheath is dull and punctate laterally. Its small size (less than 5 mm long) precludes its inclusion in both *Camptoprium* and *Heteroperreyia* (all known species more than 7 mm long). Species of *Barilochia* are the smallest known perreyiines.

KEY TO SPECIES

1. Sheath in lateral view broadly rounded at apex (Fig. 3); ovipositor length subequal to length of hind tibia; ventral margin of lancet straight (Fig. 3); antenna with 9 flagellomeres; almost entirely reddish brown (male unknown). . . . *brunneovirens*
- Sheath in lateral view narrowly rounded at apex (Fig. 5); ovipositor length about 1.2× length of hind tibia; ventral margin of lancet convex near center (Fig. 5); antenna with 10 flagellomeres in female, 13 flagellomeres in male; reddish brown with head black and large black macula on each mesonotal lateral lobe
 *longivalvula*, n.sp.

Barilochia brunneovirens Malaise
(Figs. 1–3)

Barilochia brunneo-virens Malaise
1955: 124, Figs. 5A, B. C.

Barilochia brunneovirens: Smith 1978:
168 (catalog).—Smith 1990: 42.—

Schmidt and Smith 2006: 108 (catalog).—Smith 2006: 615 (checklist).

Female (Figs. 1, 2).—Length, 4.5 mm. Head and body reddish brown; light brown macula on each mesonotal lateral lobe; abdomen paler brown than head and thorax. Antenna with 9 flagellomeres, length $1.5\times$ head width; lower interocular distance $1.5\times$ eye height. Distances between eye and hind ocellus, between hind ocelli, and from hind ocellus to posterior margin of head as 1.0:0.6:0.5. Length of inner hind tibial spur slightly less than half length of hind basitarsus. Hind basitarsus slightly less than $0.5\times$ length of remaining tarsomeres combined. Length of ovipositor subequal to length of hind tibia; short, broadly rounded at apex (Fig. 3). Ventral margin of lancet straight (Fig. 3).

Male.—Unknown.

Holotype.—Female, in NHR, labeled "TYPUS" [red], "brunneo-virens" [handwritten folded label]; "San Carlos de Bariloche, Rio Negro, 25-XI-1951" [typewritten folded label]; "Barilochia, n. gen., brunneo-virens, n. sp, R. Malaise det. 1954" [Malaise's determination label]; "245 77" [red]. San Carlos de Bariloche, Argentina is $41^{\circ}09'S$, $71^{\circ}18'W$ at an elevation of 893 m.

Remarks.—The black maculae of the lateral lobes as mentioned by Malaise are not evident in the holotype; perhaps the specimen is faded.

Barilochia longivalvula

Smith and Schmidt, new species

(Figs. 4–8)

Female (Fig. 4).—Length, 3.5 mm. Head black; antenna, labrum, and clypeus brown. Thorax and abdomen reddish brown, mesonotum slightly darker reddish brown with black macula on each lateral lobe. Abdomen darker to black on lateral areas of anterior half;

legs yellowish orange with hind coxa black. Wings hyaline; stigma and veins amber. Antenna filiform, with 10 flagellomeres; length $1.6\times$ head width; flagellomeres 3 to apical one subequal in length. Lower interocular distance $1.4\times$ eye height. Distances between eye and hind ocellus, between hind ocelli, and from hind ocellus to posterior margin of head as 1.0:0.7:0.7. Hind basitarsus slightly more than $0.5\times$ length of remaining tarsomeres combined and subequal to tarsomeres 2 and 3 combined. Length of inner hind tibial spur about half length of hind basitarsus. Sheath long, narrowly rounded at apex (Fig. 5), about $1.2\times$ length of hind tibia. Ventral margin of lancet convex near center (Fig. 5).

Male (Fig. 6).—Length, 3.0 mm. Black with pedicel and tegula brown; legs yellowish orange except for black hind tarsus. Antenna with 13 flagellomeres; length $2.5\times$ head width; scape and pedicel each slightly broader than long; 1st flagellomere longer than 2nd; flagellomeres 2 to apical one gradually decreasing in length. Length of inner hind tibial spur $0.4\times$ length of hind basitarsus. Male genitalia (Figs. 7, 8) with harpe rounded at apex, longer than broad; parapenis rounded medially, slightly rounded and projecting posteriorly; volsellae broad with narrow sagittae on medial apical margin. Otherwise similar to female.

Types.—Holotype ♀ labeled "Chile: IX Region, PN Nahuelbuta, Canete exit 1219 m Villarrica, 22.xi.2003," " $37^{\circ}48.366'S$, $073^{\circ}02.112'W$, canopy fog Nothofagus dombry, Arias et al." (USNM). Paratype: Same data as holotype (1 ♂, USNM).

Entomology.—From the Latin for long ovipositor; a compound noun in apposition.

Host.—Possibly *Nothofagus dombeyi* (Coihue) (Nothofagaceae); apparently misspelled "dombry" on the label.

Discussion.—The two species are very similar in size, color, and structure. The significant characters distinguishing the two species are the shape of the sheath in lateral view (Figs. 3, 5), the length of the sheath, and the straight vs. slightly convex ventral margin of the lancet (Figs. 3, 5). Differences in the number of antennal flagellomeres may be useful, but sometimes this number varies in species with many flagellomeres. The new species has a black head and large black maculae on the mesonotal lateral lobes. This might be useful, but color variation is unknown with so few specimens available.

The species was collected while fogging in *Nothofagus* forests. This indicates species of *Barilochia* may be found in the canopy and thus are seldom collected by hand or traps near the ground and may explain their rarity in collections.

The male was collected at the same date and place as the female, and is no doubt the male of this species. It is the first description of a male for *Barilochia*. Sexual dimorphism is evident by the longer antennae with more flagellomeres and the almost entirely black body color (Figs. 4, 6).

The type localities of the two species are approximately 150 km apart.

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